IN THE CLAIMS

Please amend page 1, lines 10-13 as follows:

The subject matter of ~~this~~ the present application is related to ~~two (2)~~ U.S. patent 7,181,653 and patent application numbers ~~_____ and _____~~ 10/733,055 filed December 11, 2003 ~~as attorney docket numbers RPS920030249US1 and RPS920030164US1, the teachings of~~ which are incorporated herein by reference.

Please amend page 6, line 12 - page 7, line 4 as follows:

Figure 1 illustrates a block diagram of a system configuration for a preferred embodiment of the present invention. Preferably, the present invention is implemented on a client computer system 100a and/or 100b. As ~~is~~ shown, a first client computer system 100a is coupled to a ~~public~~ private network 110 ~~123~~, such as ~~the Internet~~ a Local Area Network (LAN). A second client computer system 100b is coupled to a ~~private~~ public network 120 ~~110~~ such as the Internet ~~a Local Area Network (LAN)~~. The private network 110 is coupled to the public network 120 via a gateway 103. Nonetheless, those skilled in the art appreciate that a client system 100 (*i.e.*, either client computer system 100a or client computer system 100b) can be coupled to either a private or public network, and not necessarily to both. The client computer 100 can be mobile, *e.g.*, a laptop or handheld personal computer, or a stationary desktop. A suer uses the client computer system 100 to perform information management tasks, including sending and receiving electronic mail from a mail server 140 or from a company server 112, retrieving web pages from a web server 150, and sending and receiving date files from a file server 130 or the computer server 112. The client 100 includes an operating system and appropriate hardware adapters such as a dial-up modem or wireless card, or a network adapter such as Token Ring or Ethernet that allows connection to a network 110, 120 through a cable modem, DSL modem, hub, or switch.

IN THE CLAIMS

Please amend the claims as follows:

1. (currently amended) A method for re-establishing a network connection ~~between~~ for a client computer system ~~and~~ after a failed network connection, said method comprising:

~~engaging a customer in an engagement relationship, identifying characteristics of a customer's system, establishing requirements for customer's system in view of said engagement relationship,~~

collecting real-time connectivity information by said ~~customer's~~ client computer system~~, including monitoring and collecting network traffic of said customer's system in real-time, assigning a weight to the real-time network traffic based on popularity, and creating a weighted list from the weighted~~ real-time network traffic~~,~~

storing said real-time connectivity information in a local persistent knowledgebase within said client computer system;

utilizing ~~the~~ said real-time connectivity information by said ~~customer's~~ client computer system to establish a network connection with ~~the~~ a computer network~~, including detecting a failed connection, determining a cause of the failed connection by the customer's system, and generating a solution based on the cause and the real time connectivity information,~~

determining whether or not a connection failure occurred at said network connection;

in a determination that a failure occurred at said network connection, invoking an inference engine to utilize said real-time connectivity information in said ~~utilizing data from a customer's~~ local persistent knowledgebase ~~or server~~ to re-establish a network

connection to ~~the~~ said computer network~~, and storing said weighted list in the customer's system~~.

2. (currently amended) The method of claim 1, wherein said method further includes invoking a verify function by said inference engine to determine status of each communication device ~~the local persistent knowledgebase is stored in the~~ within said client computer system.

3. (currently amended) The method of claim ~~1~~ 2, wherein said method further includes determining a root cause of said connection failure by said inference engine based on status of each communication device ~~comprising: utilizing a set of local rules to establish a connection to the network~~.

4. (currently amended) The method of claim ~~1~~ 3, wherein said method further includes generating a best solution by said inference engine for re-establishing said network connection based on said root cause of said connection failure ~~comprising informing the customer of the solution~~.

5. (currently amended) The method of claim 4 1, wherein said collecting real-time connectivity information further includes ~~comprising implementing the solution~~

monitoring and collecting network traffic of said client computer system in real time; and

generating a weighted list of network traffic having address utilization listed in a descending order.

6. (currently amended) The method of claim 1, wherein said method further includes ~~comprising~~

analyzing at least one error message associated with ~~the~~ failed network connection; and

auditing a plurality of communication devices to determine which of ~~the~~ said plurality of communication devices is a potential candidate for connectivity.

7. (currently amended) The method of claim 6, wherein said method further includes ~~comprising~~

analyzing ~~the~~ real time connectivity information to determine a range of IP addresses assigned by a DHCP server~~;~~;

generating a plurality of IP addresses within ~~the~~ said range of IP addresses; and~~,~~

selecting and assigning one of ~~the~~ said plurality of IP addresses ~~and determining whether it is in use and assigning the one IP address~~ to said ~~customer's~~ client computer system if ~~the~~ said one IP address is not in use.

8. (currently amended) A ~~method for using a~~ computer ~~readable~~ storage medium containing computer program product ~~instructions by a service provider on a customer's system,~~ for re-establishing a network connection ~~between~~ for a client computer system ~~and~~ after a failed network connection, ~~under terms and conditions of an engagement relationship between said service provider and a customer,~~ said computer storage medium comprising:

~~engaging a customer in an engagement relationship, identifying characteristics of a customer's system, establishing requirements for customer's system in view of said engagement relationship,~~

program product code for collecting real-time connectivity information by said ~~customer's~~ client computer system~~, including monitoring and collecting network traffic of said customer's system in real time, assigning a weight to the real-time network traffic based on popularity, and creating a weighted list from the weighted real-time network traffic,~~

program product code for storing said real-time connectivity information in a local persistent knowledgebase within said client computer system;

program product code for utilizing ~~the~~ said real-time connectivity information by said ~~customer's~~ client computer system to establish a network connection with ~~the~~ a computer network~~, including detecting a failed connection, determining a cause of the failed connection by the customer's system,~~ and ~~generating a solution based on the cause and the real-time connectivity information,~~

program product code for determining whether or not a connection failure occurred at said network connection;

program product code for, in a determination that a failure occurred at said network connection, invoking an inference engine to utilize said real-time connectivity information in said ~~utilizing data from a customer's~~ local persistent knowledgebase ~~or server~~ to re-establish a network connection to ~~the~~ said computer network~~, and storing said weighted list in the customer's system~~.

9. (currently amended) The ~~method~~ computer storage medium of claim 8, wherein said computer storage medium further includes program product code for invoking a verify function by said inference engine to determine status of each communication device ~~the local persistent knowledgebase is stored in the~~ within said client computer system.

10. (currently amended) The ~~method~~ computer storage medium of claim 8 9, wherein said computer storage medium further includes program product code for determining a root cause of said connection failure by said inference engine based on status of each communication device ~~comprising: utilizing a set of local rules to establish a connection to the network~~.

11. (currently amended) The ~~method~~ computer storage medium of claim 10, wherein said computer storage medium further includes program product code for generating a best solution by said inference engine for re-establishing said network connection based on said root cause of said connection failure ~~comprising informing the customer of the solution~~.

12. (currently amended) The ~~method~~ computer storage medium of claim ~~11~~ 8, wherein said program product code for collecting said real-time connectivity information further includes ~~comprising implementing the solution~~

program product code for monitoring and collecting network traffic of said client computer system in real time; and

program product code for generating a weighted list of network traffic having address utilization listed in a descending order.

13. (currently amended) The ~~method~~ computer storage medium of claim 8, wherein said computer storage medium further includes ~~comprising~~

program product code for analyzing at least one error message associated with ~~the~~ failed network connection; and

program product code for auditing a plurality of communication devices to determine which of ~~the~~ said plurality of communication devices is a potential candidate for connectivity.

14. (currently amended) The ~~method~~ computer storage medium of claim 13, wherein said computer storage medium further includes ~~comprising~~

program product code for analyzing ~~the~~ real time connectivity information to determine a range of IP addresses assigned by a DHCP server~~,~~;

program product code for generating a plurality of IP addresses within ~~the~~ said range of IP addresses; and~~,~~

program product code for selecting and assigning one of ~~the~~ said plurality of IP addresses ~~and determining whether it is in use and assigning the one IP address~~ to said ~~customer's~~ client computer system if ~~the~~ said one IP address is not in use.